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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Richard Dudley Baertsch

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06/03/2004

GENERAL ELECTRIC COMPANY

GLOBAL RESEARCH

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EXAMINER

AZARIAN, SEYED H

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 06/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/774,530

Applicant(s)

BAERTSCH ET AL.

Examiner

Seyed Azarian

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-73 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-14 is/are allowed.
- 6) ☒ Claim(s) 15-18, 22-33, 35-73 is/are rejected.
- 7) ☒ Claim(s) 19-21 and 34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 May 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

RESPONSE TO AMENDMENT

1. Applicant's arguments, filed 5/5/2004, see page 12 through 14, with respect to the rejection of claims 1-73 under 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Polichar et al (U.S. patent 6,205,199).

2. Applicants' argues in essence that there is no teaching to "detector framing node".

With respect to applicant's argument regarding "detector framing node", as cited in detailed description page 4 and page 27, (including computer communication to communicate image data with a host memory of a host computer). Polichar teaches these features (Fig. 2, element 34), that illustrates, in block diagram form, control unit includes a serial communications port (refer to detecting framing node), a solid state display panel, a keyboard and operator pointing device, removable digital media which signals send and receive over the long cable (column 7, lines 12-29), also the result is that the rapid read out of the video signal from the imager is properly synchronized with digitizer of the image processor" Via serial communications port and host memory" (framing node), (column 12, lines 32-49).

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who

Art Unit: 2625

has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

4. Claims 15-17, 22-28, 30-33, 35-41, 43-66 and 68-73, are rejected under 35 U.S.C. 102(e) as being anticipated by Polichar et al (U.S. patent 6,205,199).

Regarding claim 15, Polichar discloses a detector framing node to communication image data with a host memory of a host computer, comprising, (Fig. 2, element 34, column 7, lines 12-29, that illustrates, in block diagram form, control unit includes a serial communications port (refer to detecting framing node), a solid state display panel, a keyboard and operator pointing device, removable digital media which signals send and receive over the long cable. Also (column 12, lines 32-49, the result is that the rapid read out of the video signal from the imager is properly synchronized with digitizer of the image processor" Via serial communications port and host memory", (framing node);

an image detection interface to receive image data from an image detection system (column 4, lines 41-51, a digital video transmission system controller board controls the X-ray source for acquiring digitized sample from the X-ray image sensor);

a plurality of frame buffer memory unit to receive the image data from the image detection interface, each of the frame buffer memory units comprised of a pair of random access memory chips alternately disposed on alternate sides of detector framing node card (column 23, lines 25-32, random access memory and FLASH memory are used by the CPU for programming and data storage);

a computer communication interface communicating the image data from the plurality of frame buffer memory units to the host memory (column 12, lines 32-49, communication port and host memory).

Regarding claim 16, Polichar discloses the detector framing node card, wherein said image detection interface is a fiber optic interface receiving the image data from the image detection system over an optical fiber data link (column 7, lines 1-11, fiber optic cable and or RF wireless transmission).

Regarding claim 17, Polichar discloses the detector-framing node, according to claim 16, wherein the image data is received in real time (column 2, lines 54-67 refer to real-time).

Regarding claim 22, Polichar discloses the detector framing node card, wherein the detector framing node card is a PCI card, and the computer communication bus is a PCI bus operating at a frequency of at least 33 MHz (column 11, lines 20-31, clock speed of about 33 MHz).

Regarding claim 23, Polichar discloses the detector-framing node, according to claim 15, wherein the host computer runs a non-real time operating system (column 2, lines 54-67, image data is received in real time).

Regarding claim 26, Polichar discloses the detector-framing node, wherein image data is radioscopic image data and the image detection system is an x-ray detection system (Fig. 13, column 5, lines 47-51, the radioscopic).

Regarding claim 27, Polichar et al discloses a detector framing node to communicate image data with a host memory of a host computer, comprising, an image detection interface receiving image data from an image detection system (column 23, lines 25-32, random access memory and FLASH memory are used by the CPU for programming and data storage);

a control unit controlling communication of the image data from said image detection interface within the detector framing node, and a computer communication interface

Art Unit: 2625

communicating the image data to the host memory (column13, line 11, refer to communication and host memory).

Regarding claim 31, Polichar et al discloses a detector framing node to communicate image data with a host memory of a host computer, comprising, an image detection interface receiving image data from an image detection system a control unit controlling communication of the image data from said image detection interface within the detector framing node; and a computer communication interface communicating the image data to the host memory (column13, line 11, refer to communication and host memory).

Regarding claim 40, Polichar discloses an imaging system, comprising; an image detection system to detect a radiographic image and output corresponding radiosopic image data across an optical fiber data link; a detector framing node comprising a fiber optic interface to receive the radiosopic image data from the optical fiber data link and a computer communication interface to output the image data received by the fiber optic interface onto a computer communication bus (see claim 1 and Fig. 1, column 5, lines 15-18, radiographic image).

Regarding claim 49, Polichar discloses the system according to claim 40, wherein the image detection system includes a flat panel detector having an amorphous silicon photo-diode array (Fig. 6, column 5, lines 26-29, a flat panel detector having an amorphous silicon).

Regarding claim 50, Polichar discloses a detector framing node interfacing with a host computer along a computer communication bus and interfacing with a radiation generation system along a real time bus, the detector framing node comprising; a control unit to execute a plurality event instructions received from the host computer; a real time bus interface connecting

said control unit to the real time bus, wherein said control unit controls the radiation generation system by transmitting control signals to the radiation generation system along the real time bus upon execution of the event instructions (see claim 1, and column 4, lines 41-51, refer to X-ray radiation).

Regarding claim 52, Polichar discloses the detector-framing node, further comprising; an image detection interface receiving image data from an image detection system; and a computer communication interface communicating the image data received from the image detection interface to a host memory of the host computer under control of said control unit (column 4, lines 41-58, digitized pixels transmitted by serial interface).

Regarding claim 64, Polichar discloses the card, wherein the card is programmable to receive image data from a selected flat panel detector of a plurality of different flat panel detectors (Fig. 6, column 5, lines 27-30, refer to flat panel).

Regarding claims 24-25, 28, 30, 32-33 and 37-38, recites similar limitation as claims 15, 16 and 17, are similarly analyzed.

Regarding claims 35-36 and 39, 41, 43, recites similar limitation as claims 16-17, 23 and 26-27, are similarly analyzed.

Regarding claims 44-48, recites similar limitation as claims 15, 17 and 23, are similarly analyzed.

Regarding claims 51, 53-63 and 65-73, recites similar limitation as claims 15-18, 26 and 49, are similarly analyzed.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 18, 29, 42 and 67, are rejected under 35 U.S.C. 103(a) as being unpatentable over Polichar as applied to claims above, and further in view of Aratani (U.S. 6,249,503).

Regarding claim 18, Polichar fails to disclose, "the image data is transmitted from the image detection system at a rate of 1 Gibit/sec". On the other hand Aratani teaches (Fig. 1, column 3, lines 56-62, data transfer rate in the order of Gbit/sec without destruction of the data).

Therefore it would have been obvious to one having ordinary skill in the art at the time of the invention was made, to modify Polichar invention according to the teaching of Aratani because it provides and ensure image data integrity, which is capable of transferring data at a higher rate to improve and increased communication speed that can easily be implemented in a X-ray device such as radioscopy.

Regarding claims 29, 42 and 67, recites similar limitation as claim 4, are similarly analyzed.

Allowable Subject Matter

7. Claims 19-21 and 34, are objected as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitation of the base claim and any intervening claims.

Allowable claims

8. Claims 1-14 are allowable.

Other prior art cited

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. patent (5,949,848) to Gilblom is cited for X-ray imaging apparatus and method using a flat amorphous silicon imaging panel.

U.S. patent (4,672,454) to Cannella et al is cited for X-ray image scanner and method.

U.S. patent (4,996,413) to McDaniel et al is cited for apparatus and method for reading data from an image detector.

U.S. patent (6,330,356) to Raylman et al is cited for radiation sensitive surgical probe with interchangeable tips.

U.S. patent (6,243,441) to Zur is cited for active matrix detector for X-ray imaging.

Art Unit: 2625

Contact Information

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seyed Azarian whose telephone number is (703) 306-5907. The examiner can normally be reached on Monday through Thursday from 6:00 a.m. to 7:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached at (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application information Retrieval (PAIR) system. Status information for published application may be obtained from either Private PAIR or Public PAIR.

Status information about the PAIR system, see [http:// pair-direct.uspto.gov](http://pair-direct.uspto.gov). Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Seyed Azarian

Patent Examiner

Group Art Unit 2625

May 18, 2004



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